

**AN ANNOTATED LIST OF THE HAWK MOTHS (LEPIDOPTERA: SPHINGIDAE) OF WESTERN PROVINCE, PAPUA NEW GUINEA**

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Email: maxm@amsg.austmus.gov.au**Abstract**

Records are provided for 66 species of hawk moths from Western Province, Papua New Guinea. In addition to two undescribed species, eight species, *Acherontia lachesis* (Fabricius), *Macroglossum albigutta* Rothschild & Jordan, *M. micacea* (Walker), *M. mitchelli* (Boisduval), *M. moeckii* Rüttimeyer, *M. vacillans* (Walker), *M. vidua* Rothschild & Jordan and *Hemaris venata* (C. Felder) are previously unrecorded from mainland New Guinea and seven species, *Ambulyx phalaris* (Jordan), *Hippotion joiceyi* Clark, *H. rubribrenna* Joicey & Kaye, *Macroglossum spilonotum* Rothschild & Jordan, *M. stigma* Rothschild & Jordan, *Meganoton hyloicoides* Rothschild and *Theretra polistratus* Rothschild are previously unrecorded from Papua New Guinea. The following are figured for the first time: female *Ambulyx phalaris* (Jordan), *Cypa decolor euroa* Rothschild & Jordan, *Macroglossum melas pullius* Jordan and *Hippotion joiceyi* Clark. Months of occurrence are summarised and notes given on abundance. Some nomenclatural errors in D'Abrera [1987] and Bridges (1993) are corrected.

**Introduction**

The hawk moths of Papua New Guinea remain poorly documented compared to those of most neighbouring regions, *viz.* South East Asia (Barlow 1982, Holloway 1987, Diehl [1982], Dupont & Roepke 1941) and Australia (Common 1990, Moulds 1996). This is surprising considering that New Guinea possesses a comparatively rich hawk moth fauna and has been subject to intense insect collecting in years past. D'Abrera [1987] listed 67 species from mainland New Guinea and in this paper we add a further nine species, two of which are undescribed. In comparison, Moulds (1996) listed 64 species from Australia, Holloway (1987) listed 95 from Borneo, Dupont & Roepke (1941) 97 from Java and Diehl [1982] 121 from Sumatra.

The most comprehensive summary of the Sphingidae of New Guinea is still that included in the world treatment of the family by Rothschild and Jordan (1903), which in turn forms the basis for the world compendium by Seitz (1928-29). The most complete work dealing exclusively with the Sphingidae of New Guinea remains a modest booklet of 20 pages by Mackey (1975).

In this paper we document the sphingid fauna of Western Province, Papua New Guinea. It is the largest of the provinces, occupying the south-west corner of the country adjacent to the West Irian (Indonesian) border. In essence it incorporates the Fly River basin and reaches altitudes over 3700 m along the central mountain chain of New Guinea. However, the majority of the Province comprises floodplains at altitudes below 100 m. Rainfall is extremely high in the mountains; Tabubil (altitude 650 m) averages over 7800 mm annually. At higher elevations rainfall exceeds 10 metres. At Tabubil, from where many of our hawk moth records originate, sunshine averages just 3 hours per day with daily temperatures peaking at around 30°C in summer and 25°C in winter, while minimum temperatures rarely fall

below 20°C. Tropical rainforest surrounds the Tabubil area, giving way to moss-covered mountain forest above 1000 m; the latter has established at lower altitudes than elsewhere in Papua New Guinea due to the exceptionally high rainfall around Tabubil (Hyndman and Menzies 1990). Mountain areas throughout the Province are extremely rugged, with many fast-flowing streams which are typically strewn with boulders and subject to frequent rapid changes in water level.

We record 66 species of sphingids from Western Province, which is one fewer than the number previously recorded from the entire New Guinea mainland (West Irian plus mainland Papua New Guinea). Eight species, *Acherontia lachesis*, *Macroglossum albigutta*, *M. micacea*, *M. mitchelli*, *M. moeckii*, *M. vacillans*, *M. vidua*, and *Hemaris venata* are previously unrecorded from mainland New Guinea and seven species, *Ambulyx phalaris*, *Hippotion joiceyi*, *H. rubribrenna*, *M. spilonotum*, *M. stigma*, *Meganoton hyloicoides* and *Theretra polistratus* are previously unrecorded from Papua New Guinea.

The list is based upon three years of comprehensive collecting in the area by one of us (RBL, 1991-93 and March-April 1994), supplemented by additional records from two field trips undertaken by MSM (Oct. 1993, Nov. 1996). Localities collected are representative of the mountains and foothills of the region but we lack records from the broad coastal floodplain, an area that may well add species to our list. Most collecting was at Tabubil and, to a lesser extent, at Mt Akrik. Details of collecting sites are as follows:

Kiunga, 6°08'S, 141°17'E, lowland rainforest.

Matkomrae (alternative spelling Matkomnai), 5°49'S, 140°09'E, 60 m altitude, base of foothills, rainforest.

Mount Akrik (also known as Mt Ian), 5°10'S, 141°09'E, 1625 m, drill camp site on shelf adjacent to creek, moss forest.

Mount Robinson, 5°15'S, 141°11'E, base 850 m, rainforest; summit 1640 m, moss forest.

Tabubil, 5°15'S, 141°13'E, 600 m, township, rainforest immediately adjacent on mountain sides.

Nomenclature is based on that of Moulds (1996) and D'Abrera [1987]. Numbers in parentheses following months (in roman numerals) are the accumulative totals of specimens taken. Specimens are in the collection of RBL; some duplicates are held by the Australian Museum Sydney and the collection of MSM.

## List of Species

### 1. *Agrilus convolvuli* (Linnaeus)

Tabubil, iii, v-viii, x-xii; base of Mt Robinson, iv; Mt Akrik, 1625 m, iv, x. Abundant throughout the year.

## 2. *Megacorma obliqua* (Walker)

Matkomrae, x; Tabubil, iii, iv, vi, vii, x-xii; Mt Akrik, x.

Regularly encountered but never in large numbers.

## 3. *Acherontia lachesis* (Fabricius)

Matkomrae, 1993, xi (1); Tabubil, 1993, i (1), ii (1), iii (3), iv (1), v (5), vi (38), viii (3), ix (1), x (5), xi (17), xii (12); 1994, iii (2), iv (2); 1996, xi (7); Mt Akrik, 1993, x (1), xi (1); 1994, iii (1), iv (3).

Never plentiful and not taken at all during 1991 and 1992. Almost every specimen seen was collected. Continuous monitoring ceased in late Dec. 1993. Previously known from India to the Moluccas and the Philippines but unrecorded from mainland New Guinea. In addition to the above records from Western Province, specimens have been taken recently near Christianson Research Institute, north of Madang, by Larry Orsak (pers. comm.) and MSM. It is remarkable that such a large and dramatic insect had not been found prior to 1993, which suggests it has spread through New Guinea in very recent times. It now appears to be well established and widespread.

## 4. *Meganoton rufescens titan* Gehlen

Tabubil, 1991, vi; 1992, x; 1993, ii, iv, vi, viii, x, xi; 1994, iii.

Uncommon; only 10 males and 4 females taken over three years; few others seen. Recorded from Port Moresby by Mackey (1975) as *Meganoton severina* [= *M. rufescens severina* (Miskin)].

## 5. *Meganoton hyloicoides* Rothschild

Matkomrae, x; Tabubil ii-xii; Mt Akrik, iii.

Reasonably common but never abundant except in June. Previously known only from the 'Birds Head' (Vogelkop on most maps) Peninsula of West Irian (Rothschild 1910, D'Abrera [1987]).

## 6. *Psilogamma menephron menephron* (Cramer)

Matkomrae, xi; Tabubil, ii, iv-vi, viii, x-xii; Base of Mt Robinson, iv; Mt Akrik, iv.

Abundant throughout the year but most common during June.

## 7. *Psilogamma* sp.

Tabubil, iii-xii; Base of Mt Robinson, iv.

An undescribed species which is smaller than *P. menephron* and shows little variation in size or colour. Regularly encountered but never in large numbers. Most specimens were taken from October to December 1993.

## 8. *Ambulyx wildei* Miskin

Matkomrae, x; Tabubil, iii, vi-xii; Base of Mt Robinson, iv, xii; Mt Akrik, ix.

### 9. *Ambulyx phalaris* (Jordan)

(Figs 1-3)

Matkomrae, x; Tabubil, vi, viii-xii; Base of Mt Robinson, iv, xii.

About as common as *A. wildei*. Distinguished from *A. wildei* by the long dark tapering streak on the fore wing upperside, immediately below vein  $CuA_2$  and extending between the sub-basal spot and tornus. This species is also generally larger and darker than *A. wildei*. It has been previously suggested that *phalaris* and *wildei* can be separated by the outer ring surrounding the fore-wing sub-basal spot; this marking, however, is sometimes distinct on both species and is not a reliable character for species separation. Further, the spot itself can be reduced or absent on specimens of *phalaris* (Fig. 1). D'Abbrera [1987] figures a male with a bold sub-basal spot. The female (Fig. 2) previously has not been figured. Previously known only from the Arfak Mountains located on the 'Birds Head' Peninsula, West Irian (Jordan 1919, D'Abbrera [1987]).

### 10. *Ambulyx jordani* (Bethune-Baker)

Matkomrae, x; Tabubil, ii-vi, viii-xii.

Uncommon with just the occasional specimen taken from time to time. Females are very scarce.

### 11. *Ambulyx dohertyi dohertyi* Rothschild

Kiunga, xi; Matkomrae, x, xi; Tabubil, iii-viii, x-xii; Base of Mt Robinson, xii; Summit of Mt Robinson, xii; Mt Akrik, iii, iv, ix.

Common; often occurs in very large numbers. There is some colour variation, particularly in males.

### 12. *Cypa decolor euroa* Rothschild & Jordan

(Fig. 19)

Matkomrae, x; Tabubil, iii, vi, viii-xii; Mt Akrik, ix-xi.

Usually present but never abundant. Most specimens were taken during October, November and December. Previously known from New Guinea only by the type female from Milne Bay (Rothschild and Jordan 1903) and from Port Moresby (Mackey 1975). We figure this subspecies for the first time.

### 13. *Hemaris venata* (C. Felder)

Tabubil, 1993, x (1 ♀), xi (1 ♂, 1 ♀), xii (1 ♂).

Previously recorded only from the type male from Ambon, Indonesia (Rothschild and Jordan 1903, D'Abbrera [1987]). However, Mackey (1975) figured this species from Port Moresby, misidentifying it as *Cephonodes kingii* (W.S. Macleay) and giving its status as 'rare' (= one or two records). *C. kingii* thus remains unknown beyond Australia.

14. *Cephonodes rothschildi* Rebel

Tabubil, 1993, xi (1 ♂).

Previously known only from Mt Kebea (= Keba), Owen Stanley Range.

15. *Gnathothlibus erotus eras* (Boisduval)

Matkomrae, x, xi; Tabubil, iii-vi; Mt Akrik, iii, iv, ix, x.

Abundant throughout the year.

16. *Gnathothlibus meeki* (Rothschild & Jordan)

Tabubil, x; Base of Mt Robinson, xii; Summit of Mt Robinson, xii; Mt Akrik, iii-v, ix-xi.

Often abundant at higher altitudes (Mt Akrik, 1625 m). Only a single specimen taken at Tabubil (600 m).

17. *Gnathothlibus heliodes* (Meyrick)

Matkomrae, x; Tabubil, ii-iv, vi, vii, ix-xii; Base of Mt Robinson, iv; Mt Akrik, iv, x.

A common species below 1600 m.

18. *Daphnis dohertyi* Rothschild

Matkomrae, x, xi; Tabubil, ii-vi, xi; Base of Mt Robinson, iv; Mt Akrik, iv, v, xi.

Abundant throughout the year.

19. *Daphnis hypothous moorei* (W.J. Macleay)

Tabubil, ii-vi, viii, x; Mt Akrik, xi.

Abundant throughout the year.

20. *Daphnis placida placida* (Walker)

Tabubil, iii-vi, x-xii; Base of Mt Robinson, iv; Mt Akrik, iv, v.

Regularly encountered but never in large numbers.

21. *Daphnis protrudens* R. Felder

Tabubil, ii-iv, vi, x-xii; Base of Mt Robinson, iv; Mt Akrik, iii-vi, ix-xi.

Regularly encountered but never in large numbers.

22. *Acosmeryx anceus anceus* (Stoll)

Tabubil, ii, iii, vi, xi; Mt Akrik, xi.

A very common species throughout the year.

23. *Acosmeryx miskini* (Murray)

Tabubil, ii-vii, x-xii; Mt Akrik, xi.

Regularly encountered throughout the year; rare at higher altitudes (1600 m).



Figs 1-3. *Ambulyx phalaris*, upperside: (1) male, Tabubil, lacking dark fore wing sub-basal spot; (2) female, Matkomrae; (3) male, Tabubil, with dark fore wing sub-basal spot.

24. *Eupanacra micholitzi* (Rothschild & Jordan), comb. rev.

Tabubil, iii, iv, vi, viii-xi; Mt Akrik, x.

Uncommon; rare at higher altitudes (1600 m). Two specimens reared on *Epipremnum pinnatum* (Araceae) at Tabubil; one remained in the pupal stage for 13 days, the other for 16 days. Bridges (1993) erroneously returned this species to *Panacra* Walker.

25. *Eupanacra pulchella* (Rothschild & Jordan), comb. rev.

Summit of Mt Robinson, ii; Mt Akrik, iii-v, ix-xii.

Uncommon; all specimens were taken above 1600 m. Of 33 specimens taken, only one was female. Bridges (1993) erroneously returned this species to *Panacra* Walker.

26. *Eupanacra splendens* (Rothschild)

Kiunga, xi; Tabubil, ii, iv-vi, viii-xii; Mt Akrik, iv.

One larva raised on *Epipremnum pinnatum* (Araceae) reached pupation in 21 days. Regularly encountered but never abundant; rare at higher altitudes (1600 m).

27. *Angonyx excellens* (Rothschild)

Tabubil, iv, viii-xii; Mt Akrik, ix (1).

Regularly encountered but never common; rare at higher altitudes (1600 m).

28. *Angonyx papuana* Rothschild & Jordan

Matkomrae, x; Tabubil, ii, vi, viii-xii; Mt Akrik, iv, xi.

Very large numbers taken during Oct./Nov. 1992; otherwise uncommon and always rare at Mt Akrik (1625 m).

29. *Eurypteryx molucca* R. Felder

Tabubil, 1991, xi (1 ♀); 1992, xi (1 ♀).

Only these two specimens taken during three and a half years of collecting.

30. *Eurypteryx falcata* Gehlen

Tabubil, ii-v, ix-xii; Mt Akrik, x (1).

An uncommon species; rare at Mt Akrik (1625 m).

31. *Macroglossum spilonotum* Rothschild & Jordan

Mt Akrik, iii-v, ix-xi.

Fairly common but never in numbers. Unrecorded below 1600 m. All 58 specimens collected over three and a half years were male. This species was previously known only from Mt Goliath, West Irian.

### 32. *Macroglossum nubilum* Rothschild & Jordan

Matkomrae, x; Tabubil, ii-vi, ix-xi; Mt Akrik, ix, x.

Not common but regularly encountered, with 32 males and 3 females collected over three and a half years.

### 33. *Macroglossum moeckii* Rüttimeyer

(Figs 17, 18)

Tabubil, 1992, x (1 ♂), xi (1 ♂, 1 ♀); 1993, ii (1 ♂), v (1 ♂), vi (1 ♂), ix (2 ♂♂); Mt Akrik, 1994, iii (1 ♂).

Previously known only from a single male from Schouten Islands, West Irian (Rüttimeyer 1969). D'Abrera [1987] added the locality Biak, presumably from a label attached to the type. The nine specimens encountered are all identical (including the only known female) and agree perfectly with the holotype. Not figured by D'Abrera [1987].

### 34. *Macroglossum augarra* Rothschild

(Figs 12, 13)

Mt Akrik, 1993, x (1 ♂); 1994, iii, (1 ♂, 2 ♀♀); alpine grass meadow 16 km NE of Tabubil, 2300 m, 1994, iii (1 ♀).

All specimens were taken above 1600 m. Previously known only from the type locality, Owgarra River, Papua New Guinea.

### 35. *Macroglossum corythus pylene* (C. Felder)

Tabubil, 1993, x (1 ♂), xii (2 ♂♂); Mt Akrik, 1994, iv (2 ♂♂).

### 36. *Macroglossum stigma* Rothschild & Jordan

Tabubil, 1992, xi (1 ♀); 1993, ix (1 ♀), x (1 ♂).

Previously known only from the female holotype from Dorey (= Manokwari), Bird's Head Peninsula, West Irian (Rothschild and Jordan 1903, D'Abrera [1987]).

### 37. *Macroglossum meeki* Rothschild & Jordan

(Fig. 16)

Tabubil, 1993, ix (1 ♂); Mr Akrik, 1996, xi (1 ♀).

Previously known only from the holotype male taken at Milne Bay, Papua New Guinea.

### 38. *Macroglossum vidua* Rothschild & Jordan

Matkomrae, 1993, x (1 ♀); Tabubil, 1993, vii (1 ♂), x (1 ♀), xi (2 ♂♂); Mt Akrik, 1993, x (2 ♂♂, 3 ♀♀), xi (1 ♂); 1994, iii (1 ♂).

Previously known only from the type locality, Waigeo I., West Irian.



39. *Macroglossum melas pullius* Jordan

(Figs 4, 5)

Tabubil, 1992, v (1 ♀); 1993, iii (1 ♂), vi (1 ♀), ix (1 ♂, 1 ♀), x (1 ♂), xi (1 ♂), xii (1 ♂); 1994, iv (1 ♂).

Moulds (1985, 1996) synonymised *M. melas* Rothschild & Jordan with *M. heliophila* (Boisduval), based on the wide range of colour variability found within and between populations. D'Abrera [1987] opposed this treatment and recognised *M. melas* as a separate species. Kitching (in prep.) also recognises both *melas* and *heliophila*, distinguishing them by the uniform dark brown underside of the fore wing of *melas*, while that of *heliophila* has the area basal to the submarginal line a paler chestnut brown. We follow Kitching in recognising both species and place our specimens as *melas* because of the uniform dark brown colour of the fore wing underside.

40. *Macroglossum vacillans* (Walker)

Mt Akrik, iii (1 ♀).

Only this specimen encountered in three and a half years even though it is a common species in northern Australia (c.f. Moulds 1985). Previously unrecorded from New Guinea.

41. *Macroglossum micacea micacea* (Walker)

Tabubil, 1992, x (1 ♀); Mt Akrik, 1994, iv (3 ♂♂, 3 ♀♀).

Previously recorded from Papua New Guinea only from the Louisiade Archipelago.

42. *Macroglossum rectans* Rothschild & Jordan

Matkomrae, 1993, x (1 ♂).

Apparently absent from mountain areas. Mackey (1975) recorded this species from Port Moresby although there is confusion between his plates and text; he mislabelled a figure of *M. rectans* as *M. hirundo* and figured *M. nubilum* as *M. rectans*.

43. *Macroglossum dohertyi dohertyi* (Rothschild)

Tabubil, 1993, x (1 ♀).

44. *Macroglossum caldum* Jordan

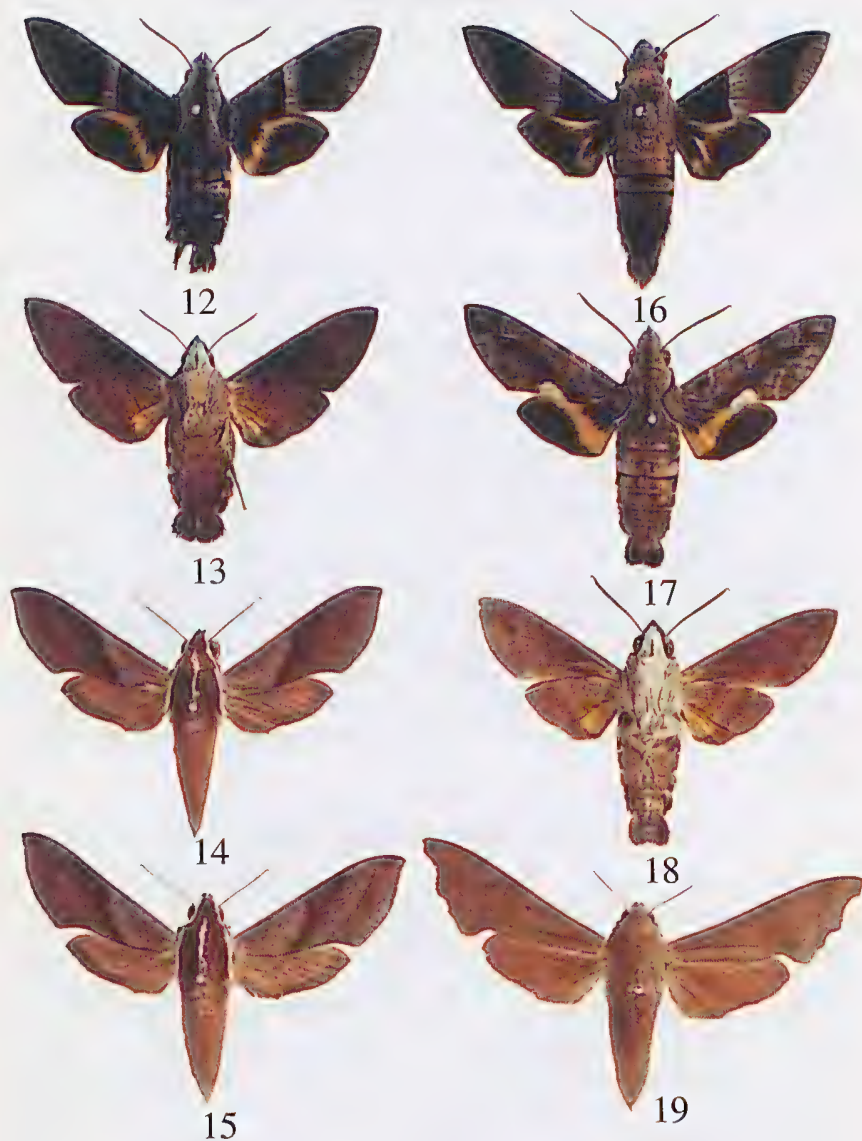
(Fig. 10)

Mt Akrik, 1993, x (1 ♂).

This specimen is tentatively assigned to *M. caldum*; it differs from the figure in D'Abrera [1987] primarily in having the hind wing orange reduced to a tornal spot and a very small ill-defined submedian spot near costal margin.



**Figs 4-11.** (4-7, left; 8-11, right) *Macroglossum* spp.: (4-5) *melas pullius*, male upperside, male underside, Tabubil; (6-7) *albigutta*, male upperside, male underside, Tabubil; (8-9) *mitchelli*, male upperside, male underside, Mt Akrik; (10) *caldum*, male upperside, Mt Akrik; (11) *calescens*, female upperside, Mt Akrik.



**Figs 12-19.** (12-15, left; 16-19, right) (12-13) *Macroglossum augarra*, male upperside, female underside, Mt Akrik; (14-15) *Hippotion joiceyi*, male upperside, female upperside, Tabubil; (16) *Macroglossum meeki*, male upperside, Tabubil; (17-18) *Macroglossum moecki*, male upperside, male underside, Tabubil; (19) *Cypa decolor euroa*, female upperside, Tabubil.

#### 45. *Macroglossum calescens* (Butler)

(Fig. 11)

Mt Akrik, x (1 ♀).

The single specimen available matches closely the figure of *M. calescens* in D'Abrera [1987], differing only in a narrower yellow band on the hindwing, blue scaling on the forewing and only two (rather than three) yellow bars on the abdomen.

#### 46. *Macroglossum albigutta* Rothschild & Jordan

(Figs 6, 7)

Tabubil, vi (1 ♂), ix (2 ♂♂), x (2 ♂♂), xi (1 ♂, 1 ♀).

Previously known only from the Solomon Islands and Bougainville, although the latter record requires confirmation. The nominate subspecies is recorded from Guadalcanal and subspecies *floridense* Rothschild & Jordan from Bougainville and Florida Island (Rothschild and Jordan 1903, D'Abrera [1987]). D'Abrera's association of Bougainville with *floridense* "Solomons (Florida, Bougainville)" is confusing as Bougainville politically is part of Papua New Guinea. Our specimens appear closest to D'Abrera's figure of *M. albigutta floridense*; the white median band on the fore wing is variable in width (compare Figs 6, 7) and on all specimens the distal half of the fore wing is nearly uniform in colour, similar to D'Abrera's *M. mediovitata*. As far as we can determine from the limited amount of material of *M. mediovitata* available to us, *M. albigutta* differs in having a pair of distinct white lateral spots midway along the abdomen and a similar pair on the last abdominal segment.

#### 47. *Macroglossum mitchelli mitchelli* (Boisduval)

(Figs 8, 9)

Mt Akrik, iii (3 ♂♂), x (1 ♂).

We question the conspecific status of *M. mitchelli mitchelli* and *M. m. imperator* (Butler). Our specimens appear similar to *M. mitchelli imperator* but the hind wing orange band is considerably narrower than that of *imperator*, fitting the description of the nominate subspecies *mitchelli* as documented by Rothschild and Jordan (1903). *M. m. mitchelli* is recorded from Java, while *M. m. imperator* ranges from Sri Lanka, India and South China to Sumatra and doubtfully Borneo. The only known specimen of *M. m. mitchelli* appears to be the type female, which we have not seen. We believe our specimens are not conspecific with *M. m. imperator* and if they do match the type of *M. m. mitchelli*, as we suspect, then *mitchelli* and *imperator* should each receive specific status.

**48. *Hippotion velox* (Fabricius)**

Matkomrae, x; Tabubil, i-vii, xi; Mt Akrik, iv, v, xii; summit of Mt Robinson, xii.

A very common species throughout the year. Adults in western Papua New Guinea show little colour variation, unlike those from many areas of the western Pacific.

**49. *Hippotion celerio* (Linnaeus)**

Tabubil, ii, iv, vi, viii, x, xi; Mt Akrik, iii, iv.

Not a common species in the region.

**50. *Hippotion boerhaviae* (Fabricius)**

Tabubil, ii, iv-vi; Mt Akrik, iv.

Not common, but a regularly encountered species.

**51. *Hippotion rubribrenna* Joicey & Kaye**

Tabubil, ii-iv, vi, viii-xii; Mt Akrik, iii, ix-xi.

Common all year round. D'Abrera [1987] placed *H. rubribrenna* as a form of *H. brennus* (Stoll). Bridges (1993) returned it to specific status which, in view of the distinct nature of this taxon, we accept as most likely correct. Joicey and Kaye (1917) described *H. rubribrenna* at species rank and the name is not infrasubspecific as erroneously stated by Moulds (1996). As far as we can determine there are no published records apart from the type which is listed as coming from the Arfak Mountains, West Irian.

**52. *Hippotion brennus* form *johanna* (Kirby)**

Matkomrae, x, xi; Tabubil, ii, iii, v-xii; Mt Akrik, iii, iv, x.

Common all year round.

**53. *Hippotion joiceyi* Clark**

(Figs 14, 15)

Tabubil, ii, vi-viii, xi; Base of Mt Robinson, iv.

Thirteen specimens encountered in three and a half years, ten during 1993. Previously known only from the type locality, Nomnaghie, West Irian. Bridges (1993) is in error when he suggested there may be homonymy for this name with Clark (1932); there is no *Hippotion joiceyi* in Clark (1932). D'Abrera [1987] recognised the specific status of *joyceyi* but suggested that it is probably a form of *H. brennus*; we consider this unlikely as *H. joiceyi* differs significantly by lacking the silver abdominal marks that are so prominent on all forms of *H. brennus*. We figure *H. joiceyi* for the first time.

54. *Theretra nessus* (Drury)

Matkomrae, x; Tabubil, ii-vi, xi, xii; Mt Akrik, iii, iv.

A very common species throughout the year; often in large numbers.

55. *Theretra polistratus* Rothschild, comb. rev.

Matkomrae, x; Tabubil, iii, iv, vi, ix-xii; Summit of Mt Robinson, xii; Mt Akrik, iii, iv.

Uncommon, especially above 1600 m. Previously known only from the type locality, Snow Mts, West Irian. Bridges (1993) erroneously placed this species in *Hippotion* Hübner.

56. *Theretra radiosa* Rothschild & Jordan, comb. rev.

Tabubil, iii-vii, x-xii; Mt Akrik, iii, iv.

A common species throughout the year. Bridges (1993) erroneously placed this species in *Hippotion* Hübner.

57. *Theretra rhesus* (Boisduval), comb. rev.

Matkomrae, x, xi; Tabubil, ii, iii, vi, vii, x-xii; Mt Akrik, x, xi; Base of Mt Robinson, iv; Summit of Mt Robinson, xii.

A common species throughout the year. Bridges (1993) erroneously placed this species in *Hippotion* Hübner.

58. *Theretra clotho celata* (Butler)

Tabubil, iii-vi, x-xii; Mt Akrik, v, ix.

A common species throughout the year.

59. *Theretra indistincta* (Butler)

Kiunga, xi; Matkomrae, xi; Tabubil, ii-iv, vi, viii-xii; Mt Akrik, iii, v, ix, x.

A very common species all year.

60. *Theretra latreillei latreillei* (W.S. Macleay)

Matkomrae, x; Tabubil, v, vi, x, xi.

An uncommon species. One specimen bred but foodplant not identified; pupal duration 22 days.

61. *Theretra tryoni* (Miskin)

Kiunga xi; Tabubil, iv-vi, ix-xi.

Uncommon and not taken above 600 m.

62. *Theretra oldenlandiae* (Fabricius)

Tabubil, v-vii, x-xii.

Never common and not taken above 600m. One specimen bred, foodplant unknown; pupal duration 20 days.

**63. *Theretra silhentensis intersecta* (Butler)**

Kiunga xi; Matkomrae, x, xi; Tabubil, ii-vii, x-xii.

Found all year but never abundant. None taken above 600 m.

**64. *Theretra brunnea* (Semper)**

Tabubil, v, ix; Mt Akrik, iii-v, ix-xii.

Mainly found at altitude (1600 m); only 3 males taken at Tabubil; 32 males and 5 females at Mt Akrik.

**65. *Cechenena helops papuana* Rothschild & Jordan**

Matkomrae, x; Tabubil, ii, iv, vi, vii, x, xii; Mt Akrik, v, x.

Uncommon but regularly taken for much of the year. Females rarely taken.

**66. Unidentified sp.**

Tabubil, 1983, 11.v (1 ♀).

An undescribed species that probably represents a new genus. Appears allied to *Eurypteryx* Felder.

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